

### REMARKS

Applicants respectfully request reconsideration of this application, and reconsideration of the Office Action dated February 21, 2003 (Paper No. 14). Upon entry of this Amendment, claims 25-27 and 29-43 will remain pending in this application. Claim 28 has been cancelled and new claims 44-47 have been added. The amendments to the claims as well as new claims 44-47 are supported by the specification and original claims. No new matter is incorporated by this Amendment. In addition, no additional fees are believed due as a result of adding the new claims.

Applicants gratefully acknowledge that Examiner's indication that claims 25, 26, 31-33, and 40 are allowed. Applicants also acknowledge the Examiner's indication that claims 29 and 35 contain allowable subject matter. While claims 29 and 35 are objected to, the Examiner indicates in the last Office Action that claims 29 and 35 would be allowable if rewritten in independent form including all of the elements of the base claim and any intervening claims. In response, Applicants have amended claim 29 to depend from claim 27. Claim 27 has also been amended in a manner which overcomes the rejection under 35 U.S.C. § 112, first paragraph (see below). Hence, Applicants respectfully submit that claim 29 is now in condition for allowance.

In addition, claim 34, from which claim 35 depends, has also been amended in a manner which overcomes the rejections under 35 U.S.C. § 112, first paragraph (see below). Hence, Applicants submit claim 35 is also now in condition for allowance.

Applicants also wish to thank Examiner Steadman for suggesting claim language during a telephone discussion April 22, 2003. Applicants note that claims 27, 34 and 35 have been amended as suggested by the Examiner. New claims 45 and 46 also are added in response to the Examiner's Comments. If the Examiner has additional suggestions which he believes will place the present application in condition for allowance, Applicants respectfully request that the Examiner contact Applicants' undersigned representative.

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Claims 41-43 are rejected under 35 U.S.C. § 112, second paragraph, as indefinite. In response, claim 41 has been amended to depend from claim 31 which has been allowed. Claim 42 has been amended to depend from claim 41. Furthermore, claim 43 has been amended to depend from claim 40 which has also been allowed. Hence, the rejection is overcome and its withdrawal is respectfully requested.

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Claims 34 and 36-39 are rejected under 35 U.S.C. § 112, first paragraph, as purportedly containing subject matter that is not adequately described by the specification. Applicants respectfully traverse.

The Office Action asserts that the specification does not disclose any fragments of SEQ ID NO: 1 and only discloses two primers.

In response, Applicants note that claim 34 has been broken up into two claims. Claim 34 has been amended to recite “a polynucleotide consisting of SEQ ID NO: 1 or a fragment thereof which encodes an acyl-CoA synthase.” In addition, new claim 46 (which corresponds to element (ii) of original claim 34) has been added and recites, “An isolated polynucleotide, comprising nucleotides 247 to 2103 of SEQ ID NO: 1 or a degenerate variant thereof which encodes an acyl-CoA synthase.” Applicants wish to thank the Examiner for suggesting the claim language that resulted in amended claim 34 and new claim 46. Applicants respectfully point out that there is literal support for each of the features of claims 34 and 45. For example, Applicants kindly direct the Examiner’s attention to the Sequence Listing of the present application which shows a fragment of the polynucleotide sequence of SEQ ID NO: 1 that encodes acyl-CoA synthase. Furthermore, the Sequence Listing also shows “nucleotides 247 to 2103 of SEQ ID NO: 1.”

Applicants again point out that the specification is not required to teach that which is known to those of skill in the art. Furthermore, there is no requirement that every

possible embodiment of the claimed invention be shown by way of example. The written description guidelines issued by the U.S. PTO state, "An adequate written description of the invention may be shown by any description of sufficient, relevant, identifying characteristics so long as a person skilled in the art would recognize that the inventor has possession of the claimed invention." *Guidelines for Examination of Patent Applications Under 35 U.S.C. § 112, first paragraph, "Written Description" Requirement*, Federal Register Vol. 66, No. 4, 2001. Applicants submit that those of skill in the art would recognize that the Inventors were in possession of the full scope of the claimed invention at the time the invention was filed. Those of skill in the art would readily know how to determine which fragments of SEQ ID NO: 1 encode acyl-CoA synthase.

The Guidelines further state, "The examiner has the initial burden, after a thorough reading and evaluation of the content of the application, of presenting evidence or reasons why a person skilled in the art would not recognize that the written description of the invention provides support for the claims. See Id. Applicants respectfully submit that this burden has not been met by the Office Action.

Applicants now turn to claim 36-39. Claims 36 and 37 have been amended to recite the terminology "consisting of." Applicants respectfully submit that those of skill in the art would readily understand how to make primers or probes of at least 15 nucleotides of SEQ ID NO:1. Accordingly, there is no need for applicant to show each and every possible probe encompassed by the claims.

The amendments to the claims and above remarks overcome this rejection. Hence, reconsideration and withdrawal of the rejection are respectfully requested.

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Claims 27, 28, 34, and 36-39 are rejected under 35 U.S.C. § 112, first paragraph, as purportedly containing subject matter that is not fully enabled by the specification. The

Office Action asserts that the specification does not enable the full scope of the claimed method. Applicants respectfully traverse.

Applicants gently remind the Examiner that the basis for raising the enablement statute is for instances where the specification fails to provide sufficient guidance to one of skill in the art to practice the invention within the scope of the claims without undue experimentation. The Office Action has raised no substantial evidence or analysis to challenge the presumption of enablement. To maintain this rejection, the Office Action must disclose persuasive evidence with a detailed analysis to demonstrate the reasoning as to why the specification would not enable one of ordinary skill in the art to practice the invention without undue experimentation.

With respect to claim 27 and 28, Applicants note that claim 28 has been incorporated into claim 27. As a result, claim 28 has been cancelled. Claim 27 thus recites, "The bacterium of claim 25, wherein said acyl-CoA synthase encoded by said isolated polynucleotide is overexpressed, and wherein said overexpression is achieved by increasing the number of copies of said isolated polynucleotide which encodes said acyl-CoA synthase." The specification contains at least two examples where overexpression of acyl-CoA is achieved by increasing the number of copies of the polynucleotide. The specification also incorporates by reference numerous well-known journal articles to which those of skill in the art can refer. Overexpression is well known to those of skill in the art. Moreover, those of skill in the art would readily understand how to overexpress a polynucleotide by increasing the number of copies of the polynucleotide in a bacterium. Furthermore, Applicants are not required to include working examples in the specification, let alone a working example of every possible embodiment. The teachings of the specification, including the examples, are such that they provide adequate guidance to those of skill in the art to make and use the claimed invention.

With respect to claims 34 and 36-39, Applicants again note that claim 34 has been amended as described above. As stated above, the specification discloses SEQ ID NO:1, fragments of SEQ ID NO:1 which encode acyl-CoA synthase and primers of at least 15 nucleotide sequences. Determining how to make additional primers and probes of SEQ ID NO:1 as well as fragments of SEQ ID NO:1 which encode acyl-CoA synthase is within the level of skill in the art given the disclosure of the present invention. Thus, the specification enables the full scope of the claimed invention.

There is clearly sufficient disclosure in the specification as to how the claimed invention may be practiced. It is reasonable to conclude that the specification does teach how to practice the claimed invention according to the full extent claimed. The Office Action has not set forth a reasonable explanation why the rejected claims are not enabled by the specification and accordingly, Applicants respectfully traverse the rejection and request that it be withdrawn.

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Claim 30 is rejected under 35 U.S.C. § 112, first paragraph, as containing subject matter that is purportedly not enabled by the specification. Applicants' respectfully traverse.

The Office Action asserts that the specification fails to fully comply with the requirements for deposited microorganisms.

The specification as originally filed contains the accession number, a brief description of the deposited microorganism, and the name of the depository. *See Page 18, Paragraph [0057]*. Furthermore, Applicants assert that the claimed invention has been accepted for deposit under the Budapest Treaty. All restrictions on the availability to the public of the material so deposited will be irrevocably removed upon the granting of a patent. Thus, Applicants submit that they have fully complied with requirements for deposited microorganisms.

The above Remarks overcome this rejection. Accordingly, reconsideration and withdrawal of the rejection are respectfully requested.

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Claim 34 is rejected under 35 U.S.C. § 102(b) as purportedly anticipated by Fujino et al. (J.Biol. Chem.). The Office Action asserts that Fujino discloses a polynucleotide fragment of SEQ ID NO:1 which encodes and polypeptide having acyl-CoA synthase activity. The Office Action thus concludes that Fujino anticipates the claimed invention. Applicants respectfully traverse.

Claim 34 is drawn to an isolated polynucleotide. The isolated polynucleotide consists of SEQ ID NO: 1 or a fragment thereof, which encodes an acyl-CoA synthase. The polynucleotide sequence described by Fujino is shown on page 16750, Fig. 1. A comparison of Fujino's sequence and the sequence of the present invention shows that Fujino's sequence is not a polynucleotide consisting of SEQ ID NO: 1 or a fragment thereof.

The Office Action appears to assert that the sequence disclosed by Fujino is the same as the claimed "fragment thereof" since the sequence of Fujino's sequence encodes a polypeptide having "rat acyl-CoA synthetase." However, as stated above, the sequence described by Fujino is not the same as the sequence of SEQ ID NO: 1 nor is it a fragment of SEQ ID NO: 1. Hence, Fujino does not anticipate the claimed invention.

The amendments to claim 34 and the above remarks overcome this rejection. Thus, reconsideration and withdrawal of the rejection are respectfully requested.

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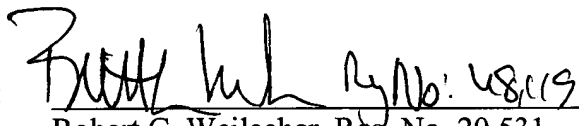
Applicants respectfully submit that this Amendment and the above remarks obviate the outstanding objection and rejections in this case, thereby placing the application in condition for immediate allowance. Allowance of this application is earnestly solicited.

Furthermore, if the Examiner deems that this Amendment does not place the application in condition for allowance, the Examiner is respectfully requested to contact Applicants' undersigned representative to discuss any remaining issues.

If any fees are due in connection with the filing of this Amendment, such as fees under 37 C.F.R. §§1.16 or 1.17, please charge the fees to Deposit Account 02-4300; Order No. 032301.1181.

Respectfully submitted,

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